

**IN THE UNITED STATES DISTRICT COURT
FOR THE EASTERN DISTRICT OF TEXAS
MARSHALL DIVISION**

BARKAN WIRELESS IP HOLDINGS, L.P.,

Plaintiff,

v.

**SAMSUNG ELECTRONICS CO., LTD.,
SAMSUNG ELECTRONICS AMERICA,
INC., VERIZON COMMUNICATIONS, INC.
and CELLCO PARTNERSHIP d/b/a
VERIZON WIRELESS,**

Defendants.

Civil Action No. 2:18-cv-00028

JURY TRIAL DEMANDED

PLAINTIFF'S OPENING CLAIM CONSTRUCTION BRIEF

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EXHIBIT LIST

Exhibit A	U.S. Patent No. 8,014,284
Exhibit B	U.S. Patent No. 8,559,312
Exhibit C	U.S. Patent No. 9,392,638
Exhibit D	'284 Patent File History
Exhibit E	IPR2018-01659, Paper 2
Exhibit F	American Heritage Dictionary (4th ed.)
Exhibit G	Microsoft Press Computer Dictionary
Exhibit H	IEEE Dictionary
Exhibit I	IBM Dictionary of Computing
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Exhibit K	Beginner's Guide to Internet Protocol (IP) Addresses, ICANN 2011
Exhibit L	Newton's Telecom Dictionary 11th Ed. 1996
Exhibit M	Introduction to Networking: How the Internet Works
Exhibit N	IPR2018-01186, Paper 6
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INTRODUCTION AND BACKGROUND

Plaintiff Barkan Wireless IP Holdings L.P. (“Barkan”) asserts that Defendants Samsung Electronics Co., Ltd., Samsung Electronics America, Inc., and Cellco Partnership d/b/a Verizon Wireless (“Defendants”) infringe certain claims of U.S. Patent Nos. 8,014,284, 8,559,312, and 9,392,638. The Patents-in-Suit are related and share a common specification.

The Patents-in-Suit disclose inventions designed to expand the reach of cellular networks through the use of “add-on” transceiver devices—“base stations”—that consumers install by connecting the base stations to existing Internet Protocol (“IP”) based infrastructure in their homes or businesses. The base stations generate a short-range cellular radio-frequency (“RF”) signal used to facilitate mobile communications between a cell phone and the base station. The base station then transmits the data received through the RF communications over a packet-based data network, such as the Internet, by coordinating with one or more management (coordination) servers. Barkan’s innovations benefit consumers and telephone network operators by providing an alternative to installing expensive cell phone towers to expand cellular networks, disclosing cheap, rapidly deployable cellular base stations that consumers can easily install.

Most of the terms in the Joint Claim Chart require no construction (or minimal construction) in light of the intrinsic evidence and the terms’ plain and ordinary meaning.¹ Defendants’ constructions largely import additional limitations into the claims, in an apparent effort to avoid infringement. Barkan respectfully requests that this Court reject Defendants’ constructions—and unsupported assertions that the terms are indefinite—and adopt Barkan’s constructions.

¹ Barkan proposed construction of 4 terms. In response, Defendants proposed that this Court construe 28 *terms*.

I. DISPUTED TERMS FOR CONSTRUCTION

1. Gateway

Term	Claims	Plaintiff's Construction	Defendants' Construction
gateway	all claims	No construction necessary; plain and ordinary meaning applies. Alternatively, an “entrance/exit to a communications network.”	A network node (hardware and software) that permits devices on one network to communicate with or gain access to the facilities of another possibly dissimilar network.

The term “gateway” appears in all claims of the Patents-in-Suit. At trial, the jurors will readily understand the general meaning of a “gateway” to be an entrance to and/or exit from *something* (e.g., a neighborhood, or a yard). Each independent claim puts the term “gateway” within the context of communications networks—i.e., a network gateway. See, e.g., Ex. A at 17:14–24² (Claim 1: “A **gateway** to a packet-based data network comprising . . . a ***first interface adapted to facilitate data flow between the mobile device and the packet-based data network***”) (emphases added); Ex. C at 17:36–41 (Claim 1: “obtain, from a server of the server system accessed via the public Internet, gateway Internet Protocol (IP) address for ***a remote gateway that includes a first interface to the public Internet and a second interface communicably coupled to a network of a telephone service provider***”) (emphasis added).

There are several claimed gateways in the Patents-in-Suit, and thus, the construction must apply to each. In the '284 and '312 Patents, the add-on base stations themselves are gateways, as they comprise an interface between two networks—the radio-frequency link with the mobile device on the one hand, and the packet-based data network on the other. In the '312 and '638 Patents, there is also a remote “gateway” that comprises an interface between the Internet on one hand, and an interface for communicating with the network of a telephone service provider on the other. In both contexts, these interfaces provide an entry/exit point to each network that is connected via the gateway. As such, the claimed “gateway” serves as a gateway (entry/exit

² Unless otherwise indicated, all specification citations derive from the '284 Patent.

point) between (i) the RF link and the packet-based data network in the case of the '284 and '312 Patents; and (ii) the Internet and the network of a telephone service provider in the case of the remote gateway in the '312 and '638 Patents. The claim context illustrates that the term “gateway” bears its plain and ordinary meaning, and no construction is necessary.

Defendants’ lengthy and complex proposed construction for the word “gateway”—a network node (hardware and software) that permits devices on one network to communicate with or gain access to the facilities of another possibly dissimilar network—has no basis in the claims, specification, or intrinsic record. Instead, it is merely a *secondary* definition that appears in one extrinsic dictionary, Hargrave’s Communications Dictionary. *See* Ex. J. Defendants’ proposed construction introduces various entities and concepts that have no basis in the claims. For example, the claims never refer to a “network node (hardware and software).” Nor do the claims mention “the facilities of another *possibly dissimilar* network.” Defendants’ proposed introduction of new entities (*e.g.*, network node) and the use of permissive language (*e.g.*, “possibly dissimilar”) only serves to obfuscate—not clarify—the scope of the claims. For these reasons, Defendants’ proposed construction should be rejected.

Should the Court conclude that construction is required, Barkan respectfully submits that the *primary* definition cited in Defendants’ extrinsic evidence should be used: “an entrance/exit to a communications network.” Ex. J. It succinctly describes a gateway with reference to the interface between communications networks involved in the claims (*e.g.*, the Internet and the telephone provider network).

2. Packet-Based Data Network

Term	Claims	Plaintiff’s Construction	Defendants’ Construction
packet-based data network	(‘284 Patent: all claims) (‘312 Patent: all claims)	an IP network, such as the Internet, used to transfer packets of data between a sender and a recipient	network carrying groups of data, control, error control, and sequence information arranged in a specific format suitable for transmission across the network, including but not limited to an IP network or the Internet.

The packet-based data network is an IP network, such as the Internet, used to transfer packets of data between a sender and a recipient. In all independent claims of the '284 and '312 Patents, the add-on base stations connect to a “packet-based data network,” over which the data from the user’s mobile device is transmitted. As the specification explains, voice data from a mobile phone is digitized and divided into “*packets* of data.” Ex. A, at 4:4–10 (emphasis added). The packets are transmitted to their destination through “*an IP network*.” *Id.* at 4:10 (emphasis added). The primary examples of such an “IP network” “include, for example . . . *the Internet*.” *Id.* at 4:4–5 (emphasis added); *see id.* at 4:38–51 (“The owner of the box connects it to an *IP network* to expand the existing cellular infrastructure—now a user can connect through the new base station to an Internet, to establish a link with a remote user.”) (emphasis added); *id.* at 5:12–14 (“[N]ew base station 43 adds a new wireless cell in a location where there is available a link to an Internet network 24.”); *id.* at 12:41–49 (“[mobile device] [u]ser 11 communicates with new base station 43, that is connected *to an Internet network* 24”) (emphasis added); *id.* at 14:34–39 (“A new base station 42 connects (bridges) between an *Internet network* 24 and the existing telephone network 23”) (emphasis added).

The clear specification language is further supported by the '284 prosecution history, which explains that “all the pending claims recite regulating access to a packet-based network (e.g. the Internet).” Ex. D, at -356 (emphasis in original). The requirement of a base station providing a connection to a “packet-based data network” was referenced during prosecution to distinguish prior art that employed a circuit-switched architecture (such as a conventional telephone network) rather than a packet-based network. *Id.*; *see also id.* at -351–53. Relying on largely the same intrinsic evidence, Barkan argues in a pending IPR that “packet-based data network” should be construed as “an IP network, such as the Internet, used to transfer packets of data between a sender and a recipient.” Ex. N, at 11–12. This IPR response distinguished the claimed “packet-based data network” requirement from “activities occurring exclusively on [a] LAN [Local Area Network].” *Id.* at 18–19. The consistent and repeated references in the intrinsic record to IP networks, particularly the Internet, dictate that the appropriate construction

of “packet-based data network” must be “an IP network, such as the Internet, used to transfer packets of data between a sender and a recipient.”

Defendants’ proposal is inconsistent with the intrinsic evidence. It seeks to add a mish-mash of unrelated limitations to the network that are never mentioned in the intrinsic evidence, such as “carrying groups of data,” and having a “specific format” for transmitting data, including “error control” and “sequence information.” Defendants’ construction of a network “carrying groups of data,” which “include[es] but [is] not limited to an IP network or the Internet,” would arguably encompass networks that are *not even packet-based*—such as the circuit-switched networks explicitly distinguished in the ’284 prosecution history. Defendants’ requirement of a “specific format” including “control, error control, and sequence information,” is not mentioned anywhere in the intrinsic record. Indeed, network **control** functionality is not even a part of the term that is being construed. The disputed term is focused on a “**data** network.” Introducing network-control limitations is wholly unwarranted given the more generic scope of the claim language and specification.

3. Coordination center

Term	Claims	Plaintiff’s Construction	Defendants’ Construction
coordination center	(’284 Patent: all claims) (’312 Patent: claims 2, 4-55)	center that provides information over the packet-based data network required for making a call	one or more computers that coordinates the operation of add-on base stations and determines and disseminates a price policy to add-on base stations

The “coordination center” is a center that provides information over the packet-based data network required for making a call through the claimed gateway base stations. For example, as Claim 1 of the ’284 Patent recites in material part:

1. A gateway to a packet-based data network comprising:

a controller adapted to regulate data flow between the mobile device and the data network based, at least partially, on **information received over the data network from a coordination center**, which center is connected to the data network through a second interface.

Ex. A, at 17:14–24 (emphasis added).

The claims require that the coordination center *provide information over the packet-based data network* to the gateway’s controller. *Id.*; *see also id.* at 17:33–36, 43–47 (Claims 2 and 3). The specification also states that the “coordination center” “provides the required information for placing a call.” *Id.* at 6:51–60; *see also id.* at 3:13–15 (“[T]he new center just provides the information required for making a call.”); *id.* 6:7–8 (explaining that coordination center “issues information relating to completing a call as required”); *id.* at 6:51–54 (“[T]he new center 3 just provides the information required for making a call.”). The coordination centers “provide information prior to a call” being completed but do not participate in the switching or routing of calls. *Id.* at 6:9–12.

The ’284 file history emphasizes the same aspects of the coordination center. For example, the patentee argued that the prior art failed to teach or suggest a “controller regulating data flow to a mobile device based on information received from a coordination center over the data network, [as] recited in the pending claims.” Ex. D, at -356 (emphasis original). This focus on the coordination center providing information over the packet-based network was repeated several times in that same Response. *See, e.g., id.* at -355 (“regulating data flow through a gateway between a mobile device and a packet-based network, based on information received over the packet-based network from a coordination center”) (emphasis in original), -357 (same). The Amendment accompanying the Response specifically added the requirements that the coordination center provide information to the controller, and that information be “received over the data network.” *Id.* at -347.

Defendants’ construction is nonsensical for two reasons. First, the claim language nowhere requires that the coordination center must “operate” the base stations. In fact, the specification states that the coordination center is *not required* to take an active operational role in routing calls placed through the base stations. *See* Ex. A, at 6:61–64 (“[C]enter 3 does not participate in the actual call routing; rather, this is performed by the caller, using the existing network infrastructure.”).

Second, the claim language, specification, and prosecution histories do not require that the coordination center determine or disseminate a pricing policy. Defendants’ proposal is based on a preferred embodiment, with no tie to the claim language. The “pricing policies” limitation was *explicitly removed* during the ’284 prosecution from claims relating to the coordination center, and placed into *different, dependent claims* that relate to another claim term. In the 12/16/2010 Amendment, then-pending claim 40 (which issued as claim 1) was amended to *remove* billing and pricing information from the claim scope:

a controller adapted to regulate data flow between the mobile device and the data network based, at least partially, on information received over the data network from ~~stored on a consideration-related policy database~~ coordination center, which center is connected to the data network through a second interface.

Ex. D, at -347. Dependent claims, such as claims 4, 11, and 19, include the consideration-related pricing policies that Defendants urge as an additional limitation for the “coordination center” term. Defendants’ proposed construction is wrong because the “consideration-related policy database” of these dependent claims, which relates to pricing policies, is presumably not inherent in independent claims relating to the coordination center. *See Phillips v. AWH Corp.*, 415 F.3d 1303, 1314–15 (Fed. Cir. 2005); *see also* Ex. E, at 30–31 (Defendants’ IPR Petition proposing construction of this term as “computer(s) that coordinate operation of the [gateways].”).

4. Consideration-related policy database

Term	Claims	Plaintiff’s Construction	Defendants’ Construction
consideration-related policy database	(’284 Patent: 4, 11, 19)	a database storing information related to billing or pricing policies	a billing database located on the Internet that is not the same database as the authentication database

The “consideration-related policy database” is a database storing information related to billing or pricing policies. In claims 4 and 11 of the ’284 Patent, the consideration-related policy database provides information that is used by the gateway controller “to regulate data flow

between the mobile device and the data network.”³ The database information relates, *inter alia*, to “price setting,” Ex. A, at 6:21, *see id.* at 10:27–31, and implementing a “price policy,” *id.* at 7:36, 7:56, 10:38–39, or a “billing policy,” *id.* at 10:27–31, 15:24–29. In a preferred embodiment, the billing policy is provided to all base stations and phones. *See id.* at 10:27–35. Barkan’s construction is thus fully supported by the claim language and specification.

Defendants’ contention that the database must be located “on” the Internet is unsupported by the claim language. Dependent claim 4 requires that information sent to *gateway base stations* be *received* over the data network—it says nothing about how the *database* connects to, or is located on, a network. *See* Ex. A, at 17:51–53. Indeed, dependent claim 4 is presumed *not* to require such a connection between the consideration-related policy database and the data network, as a connection between that database and the data network is later specified as a limitation of dependent claims 11 and 19. *See Phillips*, 415 F.3d at 1314–15; Ex. A, at 18:13–15 (“*further comprising a consideration-related policy database, connected to the data network through a third interface*”) (emphasis added); *see also id.* at 18:45–48 (same).

Defendants’ argument that the consideration-related policy database must be different from “the authentication database” is unsupported by the claims or specification. None of the ’284’s claims refer to an “authentication database,” so it would be illogical to construe the policy database to distinguish a structure that the ’284’s claims never even introduce. Likewise, the specification nowhere requires that the consideration-related policy database be separate from an “authentication database.” Defendants’ proposal is based on a misreading of one sentence of the prosecution history describing the state of the art, which states that a “billing database” and an “authentication database” are “separate and distinct entities.” Ex. D, at -392. This sentence appears in a discussion of the Xu reference, in which Barkan explained that Xu’s authentication server failed to implement consideration related policies. *See id.* (“[T]he authentication server

³ Claim 19, a method claim that does not specifically identify the controller, also includes the consideration-related policy database term.

taught in Xu is not a consideration related policy database.”). Further, as the sentence before it explains, that statement meant that such databases were distinct in *traditional cellular architectures*—not the ’284. *See id.* (“As is well known, in *most cellular architectures* the billing database . . . and the authentication database are not the same.”) (emphasis added).

5. Route Data

Term	Claims	Plaintiff’s Construction	Defendants’ Construction
route data	(’312 Patent: claims 14-21, 24-37, 40-54) (’638 Patent: all claims)	No construction necessary; plain and ordinary meaning applies. Alternatively: Send data to its destination.	select or determine the path that data will take

The term “route data” appears in certain dependent claims of the ’312 Patent and all independent claims of the ’638 Patent, and refers to sending data between certain claimed network elements—*e.g.*, mobile devices, gateway base stations, and remote centers, servers, or gateways. The term is used in its plain and ordinary sense. To the extent that the Court determines the jury requires further guidance, Barkan proposes construing the term as “send data to its destination,” consistent with its ordinary meaning and the intrinsic record.

Claim 14 of the ’312 specifies that: (i) the gateway base station obtains “address information for a remote gateway”; and (ii) then “routes data” from the mobile device to the remote gateway over the packet-based data network. *See* Ex. B, at 18:11–17; *see also* Ex. C, at 17:42–44 (“route . . . data from the mobile device, over the public Internet, to the remote gateway”). The claims thus specify a sending entity (the gateway), a destination (the remote gateway), and a communication medium through which data is routed (a packet-based data network, *e.g.*, the Internet). In this context, the apparent meaning of “route data” is simply to send the data to its destination, consistent with Barkan’s proposal.

Defendants contend that “rout[ing] data” requires “select[ing] or determin[ing] *the path* that data will take.” While it is not clear what that means, Defendants’ construction could be interpreted to require that the *gateway or controller itself* determine the *specific path* that data

will take. Such a construction is inconsistent with the intrinsic record, which does not require that routing of data involve selecting or determining the exact path the data takes. Indeed, the '284 prosecution history explicitly distinguishes networks in which system resources dictate the entire path of a transmission, such as circuit-switched networks. *See* Ex. D, at -356-57.

Defendants' proposed construction is at odds with how packet-based data networks (such as the Internet) actually work. In such networks, it is generally *not possible* for the sending device to select the exact "path" that data will take. Rather, the data first travels through intermediate devices (such as routers), each of which could transmit the data along any number of paths, as Defendants' own cited extrinsic evidence states. *See* Ex. M, at -26541-42 ("Your packet has a source address and destination address and the router needs to look at the destination address to figure out how to best move your packet towards its destination. With each router handling packets destined for any of many billions of destination computers, it's not possible for every router to know the exact location and best route to every possible destination computer."); *id.* at -26537 (routers forward each packet separately based on source and destination addresses, and different packets may take different routes). Instead, the sending devices in the relevant claims of the '312 and '638 identify the *address* of a destination device and then transmit the message onto the packet-based data network. From there, it is the *routers* that select the paths for the packets to follow. Defendants' proposed construction of "routing data" over a packet-based data network is inconsistent with the intrinsic record and how packet-based data networks work, and should be rejected.

6. Regulating Data Flow

Term	Claims	Plaintiff's Construction	Defendants' Construction
regulating data flow	'284 Patent: all claims)	Controlling access to the packet-based data network by the mobile device	Putting or maintaining in order a flow of data

The term "regulate data flow" appears in all claims of the '284 patent, and refers to controlling access to the packet-based data network by the mobile device. Claim 1 of the '284 Patent requires "a controller adapted to regulate data flow between the mobile device and the

data network.” The claims make clear that there is a distinction between “regulating data flow”—performed, for example, by the controller in claim 1—and merely facilitating data flow—performed, for example, by the interface between the gateway base station and the packet-based data network. The plain meaning of “regulate” is narrower than the plain meaning of “facilitate,” as regulation implicates control, whereas facilitation merely implicates enablement. *Compare, e.g.,* Ex. F, at -4301 (regulate: to control or direct according to rule, principle, or law), *with* -4299 (facilitate: to make easy or easier; assist).

The specification provides multiple examples of “regulating,” *i.e.* controlling access to the data network. For example, it describes an embodiment in which all incoming and outgoing calls must be authenticated and/or encrypted. *See* Ex. A, at 8:21–62. In this embodiment, a caller sends a request to connect to a specific party (or “addressee”). *Id.* at 8:32–34. This request is relayed by the base station to the coordination center, which identifies the caller and the recipient. *Id.* at 8:34–37. Then, “the center checks the authorization of the caller to sen[d] the request,” and the call will proceed only if the caller is authorized. *Id.* at 9:26–30. If the caller is authorized, the call proceeds, and the coordination center composes and sends a message to the intended recipient informing it of the requested call. *Id.* at 8:39–49. Thus, the ability of the calling mobile device to obtain access to the data network is regulated based, at least in part, on whether the calling device has been authorized. In similar fashion, and according to another embodiment, a base station may also be authorized as part of a carrier’s network and therefore be permitted to route data onto the IP network. *See, e.g., id.,* at 9:34–47. A call routed from an *unauthorized* base station will not be permitted. *See id.* (“This gives the center 3 control over the phones and base stations, that may be disconnected at short notice.”).

The prosecution history further confirms Barkan’s construction. The patentee distinguished the ’284 Patent from prior art that *allocated bandwidth* in a circuit-switched channel, but which did not regulate access to the data network through a gateway. *See* Ex. D, at -355 (“[T]he Johnson reference makes no mention whatsoever of regulating data flow through a gateway at all.”); *see id.* (explaining that ’284 claims differ from prior art “focused on bandwidth

allocation and not regulation of data flow”). The Response went on to emphasize that “each of the pending claims is specifically directed to *regulating access* of a wireless device (not RF bandwidth or buffer size) *to a packet based network* to which the gateway is connected.” *Id.* at -357 (emphasis added); *see id.* at -392 (same). This is consistent with the position taken by Barkan in recent IPR filings, in which Barkan asserted that regulating data flow meant controlling access to the data network. *See* Ex. N, at 14–15.

Finally, the words “packet-based data network” in Barkan’s construction tie the construction to the claim language. The data flow that is regulated is between “the mobile device and *the* data network.” *See* ’284 Claims 1–2 (emphasis added). “The data network” receives its antecedent basis from “a packet-based data network.” *See id.* Thus, the words “packet-based data network” clarify that the regulated *data network* is the *packet-based data network* specified in the claims.

Defendants’ proposal—“putting or maintaining in order a flow of data”—is unclear. But even if the construction were understandable, it should be rejected because Defendants fail to cite a single piece of intrinsic evidence to support their construction, and rely solely on one dictionary definition of “regulate.” The Court should adopt Barkan’s construction.

7. A Controller Adapted to Regulate Data Flow

Term	Claims	Plaintiff’s Construction	Defendants’ Construction
a controller adapted to regulate data flow	(’284 Patent: all claims)	<p>“Controller control[ing] access to the packet-based data network by the mobile device”; not a means-plus-function limitation.</p> <p>Alternatively, if construed as a means-plus-function term: claimed function: regulate data flow; corresponding structure: controller 54, or equivalent</p>	<p>means-plus-function (under <i>Williamson</i>)</p> <p>Function “regulate data flow” (“regulate” means “to put or maintain in order”)</p> <p>Structure call controller 54, but there is insufficient disclosure of how the call controller 54 performs the claimed function</p>

All claims in the '284 Patent require that the gateway base station controller performs “regulation of data flow,” the meaning of which is discussed *supra*. Thus, the proper construction of a “controller adapted to regulate data flow” is a “controller control[ling] access to the packet-based data network by the mobile device.” Defendants do not propose a construction for the term, contending that it is indefinite. The Court should reject Defendants’ position because it is unsupported by case law.

There is a presumption that this term is not means-plus-function because it does not use the word “means.” *Williamson v. Citrix Online, LLC*, 792 F.3d 1339, 1349 (Fed. Cir. 2015). Defendants can overcome the presumption *only if* the claim term fails to recite sufficiently definite structure. *Id.* Defendants cannot overcome the presumption here because Claim 1 of the '284 Patent recites more than just a generic controller—it recites “a controller adapted to regulate data flow [*i.e.*, control access] between the mobile device and the data network.” The structure is apparent from the claim language, which requires a controller that regulates data flow between a mobile device and a data network. Thus the claim recites a definite structure—a controller—to carry out this operation, which means it is not a means plus function (“MPF”) claim limitation. The Federal Circuit has found that this type of limitation does not rebut the presumption that a claim term lacking “means” is not means-plus-function. *See, e.g., Zeroclick, LLC v. Apple Inc.*, 891 F.3d 1003, 1006 (Fed. Cir. 2018) (reversing district court, and holding “program that can operate the movement of the pointer” was not means-plus-function).

Even if the term were in MPF form, the corresponding structure is readily ascertainable from the patent disclosure. Indefiniteness must be proven by clear and convincing evidence. *See Sonix Tech. Co. v. Publications Int’l*, 844 F.3d 1370, 1377 (Fed. Cir. 2017). An MPF term satisfies the definiteness requirement of § 112 if the patent contains sufficient descriptive text by which a skilled artisan would know and understand what structure corresponds to the limitation. *Bosch Automotive Serv. v. Matal*, 878 F.3d 1027, 1039 (Fed. Cir. 2017). The parties agree that if the claim *were* MPF, call controller 54 (*see* Ex. B, at Fig. 2) would be the structure, and its function would be to “regulate data flow” (as construed *supra*). The specification explains that

controller 54 supervises and controls the operation of the “channel electronic means” connecting the first and second channels. Ex. A, at 10:59–63. The first channel correlates to a wireless cellular communication path between a mobile device and a base station, whereas the second channel correlates to the communication path between the base station and the packet-based data network. *See* Ex. A, at Abstract; *id.* at 11:31–36, 11:48–50, 11:52–57; Ex. B, at Figs. 1, 2, 5–7.

According to embodiments described in the Patents-in-Suit, the calling mobile device and/or the add-on base station must be authorized by the coordination center to use the system. Ex. A, at 9:34–47. In one embodiment, the coordination center determines the identity of a requesting caller and checks if that caller is authorized to send the call request. *Id.* at 8:32–38, 9:26–30; Ex. D, at -620 (original claim 19). In another embodiment, the base station includes a unique identity that allows the center to track newly added base stations. *See* Ex. A, at 11:6–24. In this embodiment, the gateway may authenticate itself to the coordination center, which may then provide an authorization for the gateway to route data to the data network. *See, e.g., id.* at 9:34–40; Ex. B, at 20:62–67.

In both embodiments, the coordination center may issue a certificate or digital document to indicate that the mobile device and/or base station is authorized to use the network. *See* Ex. A, at 9:34–40. Figure 2 illustrates an embodiment in which authorizations issued by the coordination center are used to regulate access to the data network. *See* Fig. 2 of '284 and '312 Patents. In Figure 2, the add-on base station includes a call controller 54 that selectively connects the different communication channels (*i.e.*, the wireless cell channel and the data network). Ex. A, at 10:59–63. In the event that a mobile device (or a base station) is not authorized by the coordination center, the call controller 54 disables the connection (*i.e.*, the channel electronic means 53) between the wireless cell channel and the packet-based data network.

Therefore, even if the term is MPF, this disclosure of the controller—when understood in the context of the specification—is more than adequate to specify the structure and operation of the controller to a person of ordinary skill in the art (“POSITA”).

8. Connection Regulator Adapted to Facilitate Data Flow

Term	Claims	Plaintiff's Construction	Defendants' Construction
connection regulator adapted to facilitate data flow	('312 Patent: all claims)	<p>No construction necessary; plain and ordinary meaning applies. Not a means-plus-function limitation.</p> <p>Alternatively: a controller adapted to enable data flow and control access.</p> <p>Alternatively, if construed as a means-plus-function term: Claimed function: facilitate data flow Corresponding structure: controller 54, or equivalent</p>	<p>means-plus-function (under <i>Williamson</i>)</p> <p>Function: “facilitate data flow”</p> <p>Structure: No structure is linked to the claimed function in the specification. To the extent that anything in the specification might correspond to the claimed function, it appears to be “channel electronic means 53” which is referred to as “circuits for connecting” in the Abstract, but no structure is disclosed for the “channel electronic means 53” or the “circuits for connecting.”</p>

All independent claims of the '312 Patent require “a connection regulator adapted to facilitate data flow between the mobile device and the packet-based data network.” This term is related to the “regulating data flow” and “controller adapted to regulate data flow” terms discussed above, but differs in that it requires the connection *regulator* to *facilitate* data flow—thereby implicating both the regulation and facilitation functionality within the claims. As discussed above, “regulate” is narrower than facilitate, and means controlling access to data. “Facilitate” is broader and means to enable data flow. *See, e.g.*, Ex. F, at -4299 (facilitate: to make easy or easier; assist). Thus, a connection regulator adapted to facilitate data flow is “a controller adapted to enable data flow and control access.”

Although Defendants again argue that this term is MPF, they cannot overcome the presumption to the contrary because the term does not include the term “means.” *See Williamson*, 792 F.3d at 1349. '312 Patent claim 1 requires “a connection regulator adapted to facilitate data flow between the mobile device and the packet-based data network.” The structure

is straightforward from the claim language alone. There is a connection regulator; and that regulator facilitates data flow between a mobile device and a packet-based data network.

Even if the limitation *were* in MPF format, Defendants cannot prove it is indefinite by clear and convincing evidence. The “regulation” aspect is disclosed as discussed above with regard to the “controller adapted to regulate data flow” limitation. And the controller enables data flow between the mobile device and the data network by supervising and controlling the operation of the channel electronic means 53, which provides the communication path between the wireless communication channel and the packet-based data network. *See* Ex. A, at 10:56–63; Ex. B, at Figs. 2, 5-7. By implementing and supervising communications between channels, the call controller 54 both enables data flow (data facilitation) and controls access (data regulation) between the claimed communication channels.

9. Public Internet

Term	Claims	Plaintiff’s Construction	Defendants’ Construction
public Internet	(’312 Patent: claims 15-18, 21, 25-27, 30-31, 41-43, 47-48) (’638 Patent: claims 1-2, 4-6, 9-10, 12-14, 17, 20, 22-24, 27, 30, 32-34, 36)	No construction necessary; plain and ordinary meaning applies.	network formed by devices that are assigned public IP addresses

The “public Internet” term appears in various claims of the ’312 and ’638 Patents. In both patents, it is a specific implementation of a “packet-based data network”⁴ through which the base stations may communicate with the coordination center, consideration-related policy database, or other servers. Every juror will be familiar with the public Internet.

Defendants’ proposed construction—which replaces the term “public Internet,” with the convoluted “network formed by devices that are assigned public IP addresses”—should be

⁴ As discussed earlier, the proper construction of a packet-based data network is an “IP network, *such as the Internet*, used to transfer packets of data between a sender and a recipient.” Thus, the “public Internet” is one example of a packet-based data network.

rejected. The network comprising the “public Internet” is not the same as the network of devices that are assigned public IP addresses. Merely assigning a device a public IP address does not necessarily mean that the device forms part of the public Internet. For example, a private local Area Network (LAN) of computers with no connection to any other network can be configured to use “public IP addresses” for the computers on that LAN. These computers would be able to communicate with each other over the LAN using these IP addresses. No one would contend that the computers on a private LAN with no Internet connection are part of the “public Internet,” because such devices cannot communicate outside the LAN.

Further, to the extent Defendants are suggesting that the public Internet requirement excludes gateway base stations in a home or small business that connect to the Internet through a routing device (and therefore may lack public IP addresses), that is wrong too. While the specification *frequently* refers to devices possessing IP addresses—*see, e.g.*, Ex. A, at 8:1–3, 12:59–61, 12:65–67—the term “*public* IP address” appears nowhere in the specification or the prosecution histories. Indeed, the specification makes clear that it is precisely in such “home or office” environments that the add-on base stations would be installed, Ex. A, at 16:43–47, using “existing network infrastructure,” *id.* at 6:61–64, such as “cable TV” or an “Internet connection[],” *id.* at 5:15–16. Construing “public Internet” to mean “a-network-formed-by-devices-that-are-assigned-public-IP-addresses” would appear to be inconsistent with the preferred embodiment of the Patents-in-Suit, as the base stations may not possess public IP addresses.

10. Tamper-Free/Tamper Free Hardware⁵

Term	Claims	Plaintiff's Construction	Defendants' Construction
tamper-free/tamper free hardware	('638 Patent: claims 1-16, 18-19, 28) / ('312 Patent: claim 13)	Hardware designed to prevent or inhibit tampering	unit/hardware that includes means to destroy its contents or delete information stored therein

Claim 13 of the '312 Patent describes base station “tamper-free hardware” within which certain cryptographic keys reside. “Tamper” is susceptible to its plain and ordinary meaning, and neither party seeks to construe it. “[T]amper-free hardware” means what it says: hardware designed to prevent or inhibit tampering. *See* Ex. O, at -4272 (free: “[n]ot hampered or restricted in its normal operation”).

The specification provides several examples of “tamper-free” hardware. One implementation involves constructing base stations like a “black box” to inhibit tampering. Ex. A, at 10:47–49. Another implementation involves creation of a “black box” structure that also includes the capability to “destroy its contents or delete the information therein.” *Id.* at 10:41–44.

Defendants contend base station hardware can only be “tamper-free” if it contains the self-destruct capability described in the second example above. No one would understand “tamper-free” to be so limited. The specification is clear that the information-destruction implementation is merely one form of claimed tamper-proofing. *See id.* at 10:41–44 (“This black box can be tamper-free, **including** means to destroy its contents or delete information therein, if someone tries to tamper with it.”) (emphasis added). Defendants’ attempt to incorporate a single example of tamper-proofing into the claim language disregards the axiom that one cannot “import[] limitations from the specification into the claims when performing claim construction.” *UltimatePointer, L.L.C. v. Nintendo Co., Ltd.*, 816 F.3d 816, 822 (Fed. Cir. 2016).

⁵ As indicated in the parties’ Local Patent Rule 4-3 chart, Barkan does not agree to Defendants’ proposal to treat the terms “tamper free hardware” and “tamper free unit” as a single term. *See* Dkt. No. 69, Ex. B, at 7 n.*. Thus, Barkan briefs those terms under separate headings.

11. Tamper-free unit

Term	Claims	Plaintiff's Construction	Defendants' Construction
tamper-free unit	('638 Patent claims 1-16 18-19)	Unit designed to prevent or inhibit tampering	unit/hardware that includes means to destroy its contents or delete information stored therein, if someone tries to tamper with it

The specification contemplates that the base stations' anti-tamper features may be implemented not only through hardware (as discussed above), but also through other mechanisms associated with the base station unit, such as software-based solutions. *See* Ex. A, at 6:28-32 (describing use of "encrypt[ion] as means of "prevent[ing] tampering" with billing and pricing policies); *id.* at 10:41-44 (describing tamper-proofing to include "delet[ing] . . . information," which is necessarily performed by software). Accordingly, the tamper-free "unit" term is not limited to hardware implementations.

12. Transmission Power Lower than Transmission Power of Conventional Base Station

Term	Claims	Plaintiff's Construction	Defendants' Construction
transmission power lower than transmission power of conventional base station	('638 Patent: claims 1-16)	No construction necessary; plain and ordinary meaning applies. Alternatively: transmission power lower than the transmission power of a cellular-frequency macrocell site	Indefinite.

Claims 1-16 of the '638 Patent require that the add-on base station comprising the controller have "transmission power lower than transmission power of conventional base stations." *E.g.*, Ex. C, at 17:45-47. This is a straightforward concept that a juror will understand from the term's plain and ordinary meaning—the transmission power of the add-on base station must be lower than that of a conventional base station (like a cell tower).

If the term is construed, it should mean having transmission power lower than the

transmission power of “a cellular-frequency macrocell site.” Indeed, the claim language immediately following this term *explains* that “conventional base stations” refer to such macrocells. *See, e.g.*, Ex. C, at 17:45–48 (“[T]he add-on base station has transmission power lower than transmission power of conventional base stations *and produces a cell smaller than macrocells of conventional base stations . . .*”) (emphasis added).

This construction of “conventional base station” as a “macrocell” is also supported by the other intrinsic evidence, and dictionaries from the time of invention. For example, the specification explains that conventional base stations “use a relatively high transmit power, to overcome propagation losses in order to achieve a reliable link.” Ex. A, at 1:31–33; *see also id.* at 3:63–64 (describing a “regular base station 21 to the cellular network”), Ex. C, at Fig. 1 (depicting regular or “[e]xisting [b]ase [s]tation 21”). Such conventional base stations include cell phone towers. *See, e.g.*, Ex. A, at 16:47–:49 (conventional base stations are those that involve a “high power transmitter or a large antenna”); Ex. L, at -4287 (defining base station as “fixed device”). Conventional base stations (such as cell towers) are *macrocell* sites. *See* Ex. A, at 1:29–33 (describing conventional base station as one establishing “an RF link between each user in the *cell*”) (emphasis added); Ex. L, at -4288 (equating “cell” with a “macrocell”). Thus, this Court could construe the claim term to refer to base stations with transmission power lower than the transmission power of a cellular-frequency *macrocell* site.

Defendants’ indefiniteness challenge fails. First, Defendants bear the burden of proving the alleged indefiniteness of the claim term by “clear and convincing evidence,” which they have not done. *See Young v. Lumenis, Inc.*, 492 F.3d 1336, 1345 (Fed. Cir. 2007). Second, definiteness requires only that the “patent’s claims, viewed in light of the specification and prosecution history, inform those skilled in the art about the scope of the invention with reasonable certainty.” *One-E-Way, Inc. v. Int’l Trade Comm’n*, 859 F.3d 1059, 1063 (Fed. Cir. 2017) (quoting *Nautilus, Inc. v. Biosig Instruments, Inc.*, 134 S. Ct. 2120, 2129 (2014)).

Although Defendants’ indefiniteness argument is not clear,⁶ Barkan infers from Defendants’ extrinsic evidence citations that they will contend that having a transmission power less than that of a macrocell site is indefinite simply because the transmission power of macrocells may vary. Such an argument would fail because a POSITA would know that even the weakest macrocell has a transmission power much higher than the most powerful add-on base station. *See* Ex. A, at 16:2, 16:48–49 (describing conventional base stations as “fixed” devices, with large antennas and high transmit power); *see also Nautilus*, 572 U.S. at 909 (“[A]ny description which is sufficient to apprise [the POSITA] in the language of the art of the definite feature of the invention, and to serve as a warning to others of what the patent claims as a monopoly, is sufficiently definite to sustain the patent.”) (internal quotation marks omitted).

That the scope of the lesser transmission power of the add-on base stations is determined by reference to the *higher* power level of a macrocell is not a basis for indefiniteness. As the “[Supreme] Court [has] explained . . . relative terms—[such as] ‘substantial’ and ‘high’—[are] sufficiently definite because readers . . . skilled in the art . . . would have no difficulty . . . determining” the level needed “for the machine to operate as specified.” *One-E-Way*, 859 F.3d at 1063 (internal quotation marks omitted). Therefore, Defendants have not carried their burden of proving indefiniteness by clear and convincing evidence, as the specification confirms that the add-on base stations operate at powers much lower than the high transmit power of conventional base stations.

⁶ Defendants failed to provide an explanation pursuant to the Patent Local Rules as to why the term is indefinite. *See* Patent Local Rule 4-3(a)(2) (claim charts must include “[e]ach party’s proposed . . . indefiniteness position”); 4-3(b) (“Each party shall also simultaneously serve a disclosure of expert testimony . . . for any expert on which it intends to rely to support its . . . indefiniteness position”). Defendants have therefore waived this argument because they fail to identify in the joint claim construction chart why the term is indefinite.

13. Produces a Cell Smaller than Macrocells of Conventional Base Stations

Term	Claims	Plaintiff's Construction	Defendants' Construction
produces a cell smaller than macrocells of conventional base stations	('638 Patent: claims 1-16)	No construction necessary; plain and ordinary meaning applies. Alternatively: produces a cellular signal that extends a distance which is less than the distance of the cellular signal produced by a cellular macrocell site.	Indefinite.

Claims 1–16 of the '638 Patent require that the add-on base stations “produce[] a cell smaller than macrocells of conventional base stations.” Ex. C, at 17:45–48. The concept of the size of the cell created by the base station as compared to the size of the cell created by a macrocell is straightforward, and should be given its plain and ordinary meaning. Alternatively, should the Court determine the term warrants construction, it should be construed as follows: produces a cellular signal that extends a distance which is less than the distance of the cellular signal produced by a cellular macrocell site.

A “cell” refers to the geographic signal coverage of a base station. *See* Ex. A, at 1:38–40 (“As more users are to be served in a specific area, the cells are made smaller, and more base stations have to be installed.”); *id.* at 4:32–34 (“Once this device, the base station 41, is bought and operated by its owner, it generates a wireless cell in its surroundings.”); Ex. L (Cell), at -4291 (explaining that a “cell” is the “basic geographic unit of a cellular system,” the boundaries of which are proportional to the “transmission power”).

Defendants again argue that the term is indefinite, but fail to disclose the basis for their argument.⁷ Assuming that Defendants’ argument will be that a “cell smaller than” the

⁷ Defendants failed to provide an explanation pursuant to the Patent Local Rules as to why the term is indefinite. *See* Patent Local Rule 4-3(a)(2) (claim charts must include “[e]ach party’s proposed . . . indefiniteness position”); 4-3(b) (“Each party shall also simultaneously serve a disclosure of expert testimony . . . for any expert on which it intends to rely to support its . . . indefiniteness position”). Defendants have therefore waived this argument because they fail to identify in the joint claim construction chart why the term is indefinite.

macrocells of conventional base stations is indefinite because macrocells have varying cell sizes, it fails for the reason discussed above concerning the “transmission power” term: definiteness only requires “reasonable certainty” as to its coverage, and a POSITA would understand that the limitation does not cover cell sizes associated with conventional macrocell sites, even ones with small cells. *See One-Way*, 859 F.3d at 1063 (“relative terms” such as “high” are “sufficiently definite” because POSITA would have “no difficulty . . . in determining” the relative level required based on his knowledge and the patent specification) (internal quotation marks omitted).

Accordingly, this Court should reject Defendants’ indefiniteness challenge.

14. The Add-on Base Station...is [owned and] Installed by an individual or Entity, Separate and Distinct from the Telephone Service Provider, with access to the Public Internet

Term	Claims	Plaintiff’s Construction	Defendants’ Construction
“the add-on base station . . . is [owned and] installed by an individual or entity, separate and distinct from the telephone service provider, with access to the public Internet”	(’638 Patent: claims 5, 6, 13, 14, 23, 24, 33, 34)	No construction necessary; plain and ordinary meaning applies. Alternatively: add-on base . . . has access to the public Internet, and is set up for use by a person or entity other than a telecommunications provider	Indefinite - § 112 mixed method/apparatus claim <i>alternatively: no patentable weight</i>

Several dependent claims in the ’638 Patent require that the add-on base station be one that is “[owned and] installed by an individual or entity, separate and distinct from the telephone service provider, with access to the public Internet.” The term carries its plain and ordinary meaning. Jurors will know exactly what this phrase means—that the add-on base stations are Internet-capable devices that consumers can install on their own.

Defendants wrongly contend that this is a mixed method/apparatus claim. Under 35 U.S.C. § 112(b), a claim including “both an apparatus and the method steps of using the

apparatus is indefinite” if it makes unclear whether infringement occurs “when one creates a system that allows the user to [perform the step] . . . or . . . when the user actually [performs the step].” *IPXL Holdings, L.L.C. v. Amazon.com, Inc.*, 430 F.3d 1377, 1384 (Fed. Cir. 2005) (internal quotation marks omitted). The claim simply requires that the add-on base station is capable of being owned and installed by an individual or entity, which is not true of a conventional (macrocell) base station, which is a high-powered device. Further, to the extent that the “owned and installed” language is viewed as a functional recitation, an “apparatus claim that simply contains functional limitations that describe a structure by reciting its capabilities is *not an indefinite mixing of claim forms.*” *Motion Games, LLC v. Nintendo Co., Ltd.*, 12-CV-878-JDL, 2015 WL 11170167, at *2 (E.D. Tex. Jan. 16, 2015) (internal quotation marks omitted) (emphasis added). Additionally, “[f]unctional language may . . . be employed to limit the claims without using the means-plus-function format.” *Microprocessor Enhancement Corp. v. Texas Instruments Inc.*, 520 F.3d 1367, 1375 (Fed. Cir. 2008). Whether the claim language is indefinite turns on whether the language used “is directed at user actions or system capabilities.” *Motion Games*, 2015 WL 11170167, at *2 (internal quotation marks omitted). The “axiomatic case[]” of an improper mixed method-apparatus claim is having “specific language directed to user actions, such as ‘wherein . . . the user uses,’ [or] ‘where . . . callers digitally enter data.’” *Id.* (quoting *IPXL Holdings*, 430 F.3d at 1348). The “holding in *IPXL* is ‘very limited.’” *Id.* (citation omitted).

This claim term is not an improper mixed method/apparatus claim (and also has patentable weight) because it contains limitations describing a “structure”—the add-on base station with access to the Internet—by “reciting its capabilities”—the capability to be owned and installed by an entity other than a telephone network operator. *Motion Games, LLC*, 2015 WL 11170167, at *2 (internal quotation marks omitted). The “very limited” holding of *IPXL* does not apply to the claim because no language directs the user to perform any method step. Rather, this case is similar to *UltimatePointer, L.L.C. v. Nintendo Co., Ltd.*, where the limitation included in the apparatus claim “reflect[ed] the capability of th[e] structure rather than the

activities of the user.” 816 F.3d at 827; *see id.* at 826–27 (ruling on “generating data” limitation appearing in apparatus claim). Indeed, the capability of the add-on base station to be installed by consumers is reflected in the claim language being construed and the specification by, *inter alia*, the base stations’ simple, low-cost, expendable design, *see* Ex. A, at 5:57–61, communication mechanisms that do not require a “plurality of large switchboards,” *id.* at 5:65–66, and “size and shape . . . similar to that of a cordless telephone base,” which makes it an “easy to use device, whose operation is familiar to the user,” *id.* at 7:25–26.

Accordingly, this Court should reject Defendants’ arguments that this term is indefinite or due no patentable weight.

15. Unique Identity Bound to a Cryptographic Key

Term	Claims	Plaintiff’s Construction	Defendants’ Construction
unique identity bound to a cryptographic key	(’312 Patent: claims 8-13, 39-52)	No construction necessary. Alternatively, “unique identity associated with a cryptographic key”	unique identity and a cryptographic key included in a certificate issued by a certifying authority

Claim 8 of the ’312 Patent (and associated dependent claims) requires that the base station gateway be “associated with a unique identity bound, to a cryptographic key.” The term carries its plain and ordinary meaning: the claimed gateway must be associated with a unique identity; and that unique identity must be bound to a cryptographic key. For example, as the specification explains, each base station gateway may have its “own digital signature, which binds a cryptographic public key, with an [unique] identifier.” *See* Ex. A, at 8:9–11; *see also id.* at 11:6–30 (describing base station unique identities).

To the extent the term requires construction, it should be construed as a “unique identity *associated with* a cryptographic key.” Contemporary technical dictionaries confirm this definition. For example, the Microsoft Press Computer Dictionary defines “bind” as “to *associate* two pieces of information with one another.” Ex. G, at 4279–80 (emphasis added).

Likewise, the IBM Dictionary of Computing defines bind as “to relate” or “to associate.” Ex. I, at 4261. These definitions support Barkan’s proposal.

There is no support for Defendants’ proposed construction. Indeed, Defendants have not even attempted to define any of the words that appear in the term. Rather, they parrot the claim language, and then add an *additional* limitation that the unique identity and cryptographic key also be “included in a certificate issued by a certifying authority.” The specification states that, in one embodiment, a certificate may bind a cryptographic key to an identifier, *but neither this term nor any of the claims impose* a “certificate” limitation. *See* Ex. A, at 8:9–11. Moreover there is no mention of a “certifying authority” anywhere in the claims or specification. Lacking any intrinsic evidence for their proposed construction, Defendants’ Rule 4-3 statement resorts to four unrelated patents and a 2015 book (sixteen years after the Patents-in-Suit’s priority date).⁸ *See* Dkt. No. 69, Ex. B at 11. Indeed, the specification explicitly does *not* limit the means for achieving the unique identity. *See* Ex. A, at 11:25–26 (“Various means may be used to achieve the unique identity of each add-on base station.”); *id.* at 2:34–46 (explaining that newly added base stations (which have unique identities) are announced to the network, allowing the system to keep track of them although their location is not fixed). Thus, Defendants’ attempt to limit the unique identifier to “a certificate issued by a certifying authority” has no basis. The unrelated materials Defendants cite do not outweigh the teachings of the specification and the consistent definitions from relevant technical dictionaries.

16. Transmit Recurrent Updates

Term	Claims	Plaintiff’s Construction	Defendants’ Construction
transmit recurrent updates	’638 patent: all claims	No construction necessary; plain and ordinary meaning applies.	repeatedly send updates

The term “transmit recurrent updates” appears in all claims of the ’638 patent, and refers

⁸ The Patents-in-Suit claim priority based on a Patent Cooperation Treaty application from 1999.

to the provision by the base stations of certain geographical and operational-status information to a coordination center. The term bears its plain and ordinary meaning, in accordance with the claim language and the specification: transmitting updates that recur. Jurors will readily understand what it means for an update to be “recurrent.”

Defendants’ proposed construction of “*repeatedly* send updates” is unsupported, unhelpful to the jury, and should be rejected. To the extent Defendants believe that “recurrent” is *synonymous* with “repeatedly,” there is no need to construe the term beyond its plain and ordinary meaning. As this Court has stated, “it is not helpful to simply substitute (without specification support) one word for another word, *particularly when the substitution is no more helpful than that of the term’s ordinary meaning.*” *Astute Tech., LLC v. Learners Digest Int’l LLC*, No. 2:12-CV-689-JRG, 2014 WL 1385191, at *21 (E.D. Tex. Apr. 2, 2014) (emphasis added).

To the extent Defendants believe that proposing a construction of *repeated* in lieu of *recurrent* would imply a requirement of more frequent updates, Defendants fare no better. As discussed, neither the claim terms nor specification speak of *repeated* updates—just recurrent ones. Indeed, the specification is clear that the recurrent updates need not occur with any frequency. The specification states that it may be too “expensive” and the coordination center may be “overload[ed]” if “*too high* a frequency of reporting” of the updates “to the [coordination] center is used.” Ex. A, at 7:46–50 (emphasis added). In other words, there is a need to “*limit* the rate of updates” reported by the add-on base station to the coordination center. *Id.* at 7:51–52 (emphasis added). There is nothing about the meaning of the word “updates” that implies that the update must recur with any specific frequency. *See* Ex. H (Update [1]: “The process of modifying or reestablishing data with *more recent* information.”).

17. Recurrently Issuing an Operating License

Term	Claims	Plaintiff's Construction	Defendants' Construction
recurrently issuing an operating license	'638 patent: all claims	No construction necessary; plain and ordinary meaning applies.	repeatedly issuing a certificate or another digital document, to the effect that this phone/base station is part of my network and is in working order

The term “recurrently issuing an operating license” appears in all claims of the '638 Patent and refers to a license provided by the coordination center to the base station, which allows the base station to operate. *See* Ex. A, at 9:41–42 (“This allows a phone to ask the services of a base station only if it has an updated operating license.”). No further construction is necessary. Jurors will understand what it means for a device to be licensed to operate. That the license issuance *recurs* is likewise readily understandable to a jury.

Defendants’ convoluted construction of this term attempts precisely what case law “caution[s] against”—“importing limitations from the specification into the claims when performing claim construction.” *UltimatePointer*, 816 F.3d at 822. Defendants appear to rely on a specification passage stating that one capability of the coordination center is to issue a “*certificate* (an operating license) or another digital document, to the effect that ‘this phone/base station is part of my network and is in working order.’” Ex. A, at 9:34–37 (emphasis added).

Even if it *were* proper to read exemplary specification terms into the claim (it is not), Defendants’ construction would fail because it misreads the specification. First, the quoted specification passage defines *what a certificate is, not what an operating license is*. The passage states that a coordination center may issue (1) a “certificate” (defined in parentheses as a form of “operating license”); or (2) “another digital document.” Ex. A, at 9:34–36. In other words, the specification passage provides that a *certificate* is a form of “operating license” or “digital document,” not that an *operating license* is limited to a certificate or digital document. Second, the fact that a “certificate” is a form of “operating license” does not mean that an operating

license is always a certificate. The specification states nothing more than that a *certificate* is a form of operating license that an add-on base station may issue.

18. Adapted to

Term	Claims	Plaintiff's Construction	Defendants' Construction
adapted to	'638 patent: all claims '284 patent: 1, 2, 4-18 '312 patent: all claims	No construction necessary; plain and ordinary meaning applies.	Configured to

The term “adapted to” is used in all claims of the ’638, all claims of the ’312, and several claims of the ’284 to describe the operational capabilities of the claimed apparatuses—such as the base station controller. Because the jury will understand what it means for the base stations to be “adapted to” achieve that operational capability, there is no need to construe the term.

There is nothing in the claim language or specification limiting “adapted to,” or otherwise indicating that the term bears anything other than its plain and ordinary meaning. For example, its use in claims such as Claim 1 of the ’638 patent would be readily understandable to jurors. *See* Ex. C, at 17:22–25 (add-on base station’s controller is “*adapted to*: determine current geographical location data for the add-on base station using a global positioning system (GPS) device”). In cases in which neither the claim language nor the specification constrains its meaning, the term “‘adapted to’ is not ambiguous” and, accordingly, Defendants cannot “show[] that further construction is required.”” *Profectus Tech. LLC v. Huawei Techs. Co., Ltd.*, 11-cv-474, 2014 WL 1575719, at *8 (E.D. Tex. Apr. 17, 2014), *aff’d*, 823 F.3d 1375 (Fed. Cir. 2016); *see id.* (“The parties dispute . . . whether ‘adapted to’ should be construed [T]he Court finds no construction is necessary . . .”).

Defendants’ proposed construction—which seeks to replace one readily understandable word (“adapted”) with a different word (“configured”)—has no specification support, and provides no greater clarity to a juror. *See Astute Tech., LLC*, 2014 WL 1385191, at *21 (“[I]t is

not helpful to simply substitute (without specification support) one word for another word, particularly when the substitution is no more helpful than that of the term's ordinary meaning.").

II. CONCLUSION

Barkan respectfully requests that the Court reject Defendants' proposed constructions and adopt its constructions. Barkan submits that its proposed constructions are consistent with the language of the claims, the specifications, and the prosecution histories.

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Respectfully Submitted,

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CERTIFICATE OF SERVICE

I hereby certify that a copy of the foregoing document was filed electronically in compliance with Local Rule CV-5(a). Therefore, this document was served on all counsel who are deemed to have consented to electronic service. Local Rule CV-5(a)(3)(A). Pursuant to Fed. R. Civ. P. 5(d) and Local Rule CV-5(d) and (e), all other counsel of record not deemed to have consented to electronic service were served with a true and correct copy of the foregoing by email on this the 5th day of December, 2018.

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